

Appl. No. 10/691,814  
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**AMENDMENTS TO THE CLAIMS:**

1. (Previously presented) A method for monitoring a bolus delivered from a pump to a fluid infusion catheter, comprising the steps of:  
delivering the bolus to the infusion catheter over a period of time lasting between approximately one minute and approximately 60 minutes; and  
observing a measured intra-catheter pressure versus time during the bolus delivery, wherein observation is made as to whether the measured pressure initially increases at an approximately linear rate followed by a decrease in measured pressure.
2. (Original) The method of claim 1, wherein the period of time is between approximately 1 minute and 3 minutes.
3. (Original) The method of claim 1, wherein a volume of the bolus is between approximately 0.05 mL and approximately 1 mL.
4. (Original) The method of claim 3, wherein the volume is between approximately 0.1 mL and approximately 0.25 mL.
5. (Original) The method of claim 1, further comprising the step of inferring a successful bolus delivery based on an observed decrease in the pressure following an observed increase in the pressure during the bolus delivery.
6. (Original) The method of claim 1, further comprising the step of inferring a leak in the infusion catheter based on an observed non-linear increase in the pressure during the bolus delivery.
7. (Original) The method of claim 1, further comprising the step of inferring a leak in the infusion catheter, proximal to the valve, based on an observed

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pressure which does not increase within approximately 10 seconds from a start of the bolus delivery.

8. (Original) The method of claim 1, further comprising the step of inferring an occlusion of the infusion catheter based on no observed pressure decrease following an observed pressure increase, during the bolus delivery.

9. (Previously presented) A method for controlling a bolus delivered to a pressure-responsive valve of a fluid infusion catheter, comprising the steps of:  
delivering the bolus through the infusion catheter over a period of time lasting between approximately 1 minute and approximately 60 minutes;  
monitoring intra-catheter pressure versus time during the bolus delivery;  
and

aborting the bolus delivery if the pressure versus time does not conform to a predetermined pattern of pressure change over time.

10. (Original) The method of claim 9, wherein the predetermined pattern includes an approximately linear increase in the pressure versus time.

11. (Original) The method of claim 9, wherein the predetermined pattern includes an increase in the pressure and then a decrease in the pressure after approximately 50 seconds from a start of the bolus delivery.

12. (Original) The method of claim 9, wherein the period of time is between approximately 1 minute and approximately 3 minutes.

13. (Original) The method of claim 9, wherein a volume of the bolus is between approximately 0.05 mL and approximately 1 mL.

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14. (Original) The method of claim 13, wherein the volume is between approximately 0.1 mL and approximately 0.25 mL.